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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,056	01/30/2004	Hiroyuki Ishida	02008.142001	7031

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EXAMINER

LE, KHANH H

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/769,056

Applicant(s)

ISHIDA ET AL.

Examiner

Khanh H. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 30 January 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "The rear sealing part 202 has a shape like a quarter sphere having its center around the semiconductor light emitting device 104" (Paragraph 0045, lines 4-6) as described in the specification. A center of an object is a point and therefore it cannot be place around another object at the same instant. In addition, the drawing did not showed "the radius of curvature". Therefore, the sentence "The front sealing part 204 has a shape in which a radius of curvature of a surface in the cross section parallel to the direction in which the vehicular headlamp 400 (see Fig. 1) emits light is smaller than that of the surface of the component like a quarter sphere serving as the rear sealing part 202, for example." (Paragraph 0046, lines 7-12) is unclear and difficult to understand.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement

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sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Claim 2 is objected to because of the following informalities:

As discussed above, the phrase the rear sealing part "having its center around said semiconductor light emitting device" is unclear. In addition to that, the phrase "a front sealing part having a shape in which a radius of curvature of a surface in cross section parallel to a direction of light emission by said vehicular headlamp is smaller than a radius of curvature of a surface of said quarter sphere" is also unclear.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claim 6 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mize (US Patent No. 6,328,456 B1).

5. With respect to claim 6, Mize disclosed a light emitting diode that can be use in a headlamp of an automobile (Col. 2, line 26) having a light transmitting member that can radiate light spherically over an angle greater than 180° and up to 270° (Col. 2, lines 27-30). Mize's light emitting diode could transmit light straight (Fig. 4, and Fig. 5, item 41) or deflect light (Fig. 3, item 35, and Fig. 4) to the forward direction of an automobile.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Patent No. 5,199,779) in view of Mize (US Patent No. 6,328,456 B1).

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9. With respect to claim 1, Sato teaches a headlamp for emitting light ahead of an automobile having a reflector (Fig. 3, item 22) and a bulb (item 24) with the light transmitting member that located at the focal point of the reflector (Fig. 3, item O₁, Col. 2 lines 57-58). Sato did not teach the light source for a headlamp is a semiconductor light emitting device. Mize teaches a light emitting diode (LED, Fig. 2, item 10) that is suitable for use in vehicle headlights (Col. 2, line 23-26) having a light transmitting member (translucent envelope, item 22) that can radiate light spherically over an angle greater than 180° and up to 270° (Col. 2, lines 27-30). Furthermore, Mize teaches light emitting diode has many advantages over incandescent bulb. Light emitting diode consumes less power, has longer life, can withstand shock and vibration, and therefore reduces in operating costs (Col.1 line 26-37). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the light emitting device of Mize in the headlamp of Sato so that the headlamp of Sato consumes less power, has longer life, can withstand shock and vibration, and therefore reduces in operating costs.

10. With respect to claim 2, Sato teaches a headlamp for emitting light ahead of an automobile having a reflector covered the light source from the back of the lamp (Fig. 3) and a sealing part. However, the sealing part is different in shape because the Sato headlamp does not use a semiconductor light emitting device as a light source. Mize teaches a light emitting diode can have many different shapes for the light transmitting member (Fig. 2, and 6-9) but Mize light transmitting member does not have neither the front sealing part nor the rear sealing part because Mize's light emitting device having

symmetrical shapes. However, Mize teaches the shape of the light emitting member may be changed depend upon the characteristics such as the shape of the lamp's reflector or other factors (Col. 6, lines 10-17). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the shape of the sealing part of Mize's light emitting diode so that Mize's light emitting diode can further concentrate some of the emitted light to the reflector and some of the light to the lens and mounted Mize's light emitting diode in to the headlamp of Sato so that the headlamp of Sato can be more efficient to operate.

11. With respect to claim 3, Sato's headlamp lens receives part of the light from the reflector and part of the light directly from the light source (Fig. 3).

12. With respect to Claim 5, Sato's (US Patent No. 5,199,779) teaches a headlamp for emitting light ahead of an automobile having an elliptical reflector (Fig. 3, item 22) but did not teach about the parabolic reflector. Mize teaches a light emitting diode (LED, Fig. 2, item 10) that is suitable for use in vehicle headlights (Col. 2, line 23-26) having a light transmitting member (translucent envelope, item 22) that can radiate light spherically over an angle greater than 180° and up to 270° (Col. 2, lines 27-30). Mize also teaches the light that reflect by a parabolic reflector (Fig. 5, item 39) is substantially horizontal direction, and the deflected light (item 41) that generated by the light emitting diode (item 22) is substantially horizontal direction. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include the parabolic reflector and the light emitting diode of Mize to the headlamp of Sato so that the headlamp of Sato can disperse light in a substantially horizontal direction.

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13. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Patent No. 5,199,779) in view of Mizé (US Patent No. 6,328,456 B1) as applied to claim 1 above, and further in view of Sato (US Patent No. 5,459,664).

14. With respect to claim 4, Sato's (US Patent No. 5,199,779) discloses a headlamp for emitting light ahead of an automobile having a light blocking member (Fig. 3, item is un-numbered) located between the light source (item 24) and the lens (item 27) to block part of the light reflected from the reflector, and part of the light from the light source.

Sato also teaches a headlamp for emitting light ahead of an automobile having a reflector that reflects light near the edge of the light blocking member (Fig. 3, point O₂, Col. 2, lines 59-61) but did not teach about the light pattern produced by the headlamp. However, in another invention of Sato (US Patent No. 5,459,664), Sato discloses a headlamp for emitting light ahead of an automobile having the same configuration as the headlamp in patent US Patent No. 5,199,779 can produce a light beam distribution pattern having a clear-cut line corresponding shape of the light blocking member (Col. 3, line 67 - Col. 4, line 9).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schoniger et al. (US Patent No. 5,136,483), Bertling et al. (US Patent No. 5,570,951), Harbers et al. (US Patent No. 6,406,172 B1), Sato (US Patent No. 5,526,239), Gallo (5,803,576), Iwasaki (US Patent No. 5,394,310).

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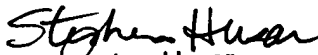
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh H. Le whose telephone number is (571) 272-8325. The examiner can normally be reached on Monday - Friday, 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh H. Le
Examiner
Art Unit 2875

KHL


Stephen Husar
Primary Examiner